Chapter: 23

State(s): Washington

Recovery Unit Name: Northeast Washington

Region 1
U.S. Fish and Wildlife Service
Portland, Oregon

DISCLAIMER

Recovery plans delineate reasonable actions that are believed necessary to recover and/or protect listed species. Recovery plans are prepared by the U.S. Fish and Wildlife Service and, in this case, with the assistance of recovery unit teams, State and Tribal agencies, and others. Objectives will be attained and any necessary funds made available subject to budgetary and other constraints affecting the parties involved, as well as the need to address other priorities. Recovery plans do not necessarily represent the views or the official positions or indicate the approval of any individuals or agencies involved in the plan formulation, other than the U.S. Fish and Wildlife Service. Recovery plans represent the official position of the U.S. Fish and Wildlife Service *only* after they have been signed by the Director or Regional Director as *approved*. Approved recovery plans are subject to modification as dictated by new findings, changes in species status, and the completion of recovery tasks.

Literature Citation: U.S. Fish and Wildlife Service. 2002. Chapter 23, Northeast Washington Recovery Unit, Washington. 73 p. *In*: U.S. Fish and Wildlife Service. Bull Trout (*Salvelinus confluentus*) Draft Recovery Plan. Portland, Oregon.

ACKNOWLEDGMENTS

Members of the Northeast Washington Recovery Unit Team that helped develop this chapter include:

Joe Maroney, Kalispel Tribe
Tom Shuhda, U.S. Forest Service, Colville National Forest
Curt Vail, Washington Department of Fish and Wildlife
Brian Crossley, Spokane Tribe
Rick Donaldson, U.S. Fish and Wildlife Service
Carmen Andonaegui, Washington Conservation Commission
Sandy Lembcke, Washington Department of Fish and Wildlife
Tim Cummings, U.S. Fish and Wildlife Service

Additional review and comments were provided by:

Jim Uehara, Washington Department of Fish and Wildlife
Terry Jackson, Washington Department of Fish and Wildlife
Scott Deeds, U.S. Fish and Wildlife Service
Bob Hallock, U.S. Fish and Wildlife Service
Steve Roberge, Pend Oreille Conservation District

NORTHEAST WASHINGTON RECOVERY UNIT
CHAPTER OF THE BULL TROUT RECOVERY PLAN

EXECUTIVE SUMMARY

CURRENT SPECIES STATUS

The U.S. Fish and Wildlife Service issued a final rule listing the Columbia River and Klamath River populations of bull trout (*Salvelinus confluentus*) as a threatened species under the Endangered Species Act on June 10, 1998 (63 FR 31647). The Columbia River Distinct Population Segment is threatened by habitat degradation and fragmentation, blockage of migratory corridors, poor water quality, and past fisheries management practices such as the introduction of nonnative species.

The Northeast Washington Recovery Unit encompasses the mainstem Columbia River and all tributaries above Chief Joseph Dam up to the Canadian border, Spokane River and its tributaries upstream to Post Falls Dam, and the Pend Oreille River and its tributaries from the Canadian border upstream to Albeni Falls Dam. It is likely that historic distribution of bull trout was more expansive than currently observed. Bull trout most likely migrated seasonally from Lake Pend Oreille downstream into the Pend Oreille River tributaries to spawn and rear. Use of the mainstem Pend Oreille River for feeding and overwintering is also likely.

The Northeast Washington Recovery Unit Team identified one core area (Pend Oreille) within the recovery unit. For the purposes of recovery, a core area represents the closest approximation of a biologically functioning unit. Core areas consist of both habitat that could supply all the necessary elements for every lifestage of bull trout (*e.g.*, spawning, rearing, migratory, and adult), and have one or more groups of bull trout. Core areas are the basic units on which to gauge recovery within a recovery unit. The Northeast Washington Recovery Unit Team has identified one extant local population (Le Clerc Creek complex) within the core area. Coordination of recovery actions with the Clark Fork Recovery Unit,

specifically reestablishing the historic connection with Lake Pend Oreille (Idaho), is essential for recovery of the Pend Oreille Core Area in Washington.

Bull trout in the South Fork of the Salmo River may be comprised of both fluvial and resident populations. Uncertainty surrounding the life history patterns of remaining bull trout in the South Fork Salmo River and the use, and reliance on habitat in British Columbia, precluded the delineation of a core area for the Salmo River. The Northeast Washington Recovery Unit Team believes that further survey work is needed in order to distribution of bull trout in this system. Continued cooperation with the British Columbia Ministry of Fisheries will be needed in order to gain a better understanding of the current status and distribution of bull trout in the South Fork Salmo River.

While bull trout have been documented in other areas within the recovery unit outside the Pend Oreille Core Area (*e.g.*, Spokane River, Onion Creek, Big Sheep Creek, Deadman Creek, Boulder Creek, and in Lake Roosevelt), the Northeast Washington Recovery Unit team needs additional information to evaluate how these areas would contribute to recovery. These areas have been identified as research needs. Research needs apply to areas where the Team feels more information is needed in order accurately determine full recovery in this recovery unit and implement recovery actions. The result of research efforts may include the designation of an additional core area and local population(s).

HABITAT REQUIREMENTS AND LIMITING FACTORS

A detailed discussion of bull trout biology and habitat requirements is provided in Chapter 1 of this recovery plan. The limiting factors discussed here are specific to the Northeast Washington Recovery Unit chapter. Within the recovery unit, historical and current land use activities have impacted bull trout local populations. The construction and operation of Albeni Falls, Box Canyon, and Boundary Dams on the Pend Oreille River have fragmented habitat and negatively impacted migratory bull trout. Other dams and diversions without fish passage facilities in tributaries to the Pend Oreille River further fragmented habitat and reduced connectivity. Impacts from past timber harvest have altered habitat conditions in portions of the recovery unit; the legacy of these activities

still persists where high densities of roads, impassable culverts, channel changes, and compaction of hill slopes remain. Livestock grazing has degraded habitat in both upland and riparian areas of most tributaries in the watershed on public and private land. Nonnative species have been introduced in the recovery unit and continue to impact bull trout populations through competition and hybridization.

RECOVERY GOALS AND OBJECTIVES

The goal for bull trout recovery is to **ensure the long-term persistence of self-sustaining complex, interacting groups of bull trout distributed across the species native range, so that the species can be delisted.** To accomplish this goal four objectives dealing with distribution, abundance, habitat, and genetics were identified for the Northeast Washington Recovery Unit.

- Maintain current distribution of bull trout and restore distribution in previously occupied areas within the Northeast Washington Recovery Unit.

- Maintain stable or increasing trends in abundance of bull trout.

- Restore and maintain suitable habitat conditions for all bull trout life history stages and strategies.

- Conserve genetic diversity and provide opportunity for genetic exchange.

RECOVERY CRITERIA

Recovery criteria for the Northeast Washington Recovery Unit reflect the stated objectives and consideration of population and habitat characteristics within the recovery unit. Based on four population and habitat elements, bull trout were placed into categories of relative risk. Northeast Washington Recovery Unit Team members evaluated bull trout under current and potential recovered conditions based on the number of local populations, adult abundance, population trends and variability, and the connectivity of the system. These elements were derived from the best scientific information available concerning

bull trout population and habitat requirements. Evaluation of these elements under a recovered condition assumed that actions identified within these chapter had been implemented. Bull trout in the Northeast Washington Recovery Unit may have been extirpated from former habitat, and remaining groups are fragmented, and isolated by a variety of factors.

Recovery criteria identified for the Northeast Washington Recovery Unit are:

1. **Bull trout are distributed among at least nine local populations in the Northeast Washington Recovery Unit (Pend Oreille Core Area).** Local populations under a recovered condition are Cedar Creek (Pend Oreille County), Indian Creek, Mill Creek, Sullivan Creek (including Sullivan Lake and tributaries), Slate Creek, Calispell Creek, Tacoma Creek, Ruby Creek, and the Le Clerc Creek complex (including the East and West Forks of Le Clerc creek, and Fourth of July Creek). Designation of local populations is based on survey data and the professional judgement of Northeast Washington Recovery Unit Team members. Further genetic studies are needed in order to more accurately delineate local populations, quantify spawning site fidelity, and determine straying rates. The complete distribution of resident local populations in the recovery unit is unknown. The Northeast Washington Recovery Unit Team recommends that further studies be conducted on the current and recovered distribution of resident bull trout in the recovery unit. Additional local populations may be added to this total as additional information is gathered in areas outside the currently designated core area for this recovery unit. Geographic distribution of resident local populations should be identified within three years and actions needed to implement re-introduction efforts will be incorporated in the five year review of the Northeast Washington Recovery Unit plan.

2. **Estimated abundance of bull trout among all local populations in the Northeast Washington Recovery Unit (Pend Oreille Core Area) is between 1,575 and 2,625 migratory adults.** Recovered abundance was derived using the professional judgement of the Team and estimation of productive capacity of identified local populations. Resident life history

forms are not included in this estimate, but are considered a research need. As more data is collected, recovered population estimates will be revised to more accurately reflect both the migratory and resident life history components.

3. **Adult bull trout exhibit a stable or increasing trend for at least 2 generations at or above the recovered abundance level within the Northeast Washington Recovery Unit (Pend Oreille Core Area).** The development of a standardized monitoring and evaluation program which would accurately describe trends in bull trout abundance is identified as a priority research need. As part of the overall recovery effort, the U.S. Fish and Wildlife Service will take the lead in addressing this research need by forming a multi-agency technical team to develop protocols necessary to evaluate trends in bull trout populations.

4. **Specific barriers to bull trout migration in the Northeast Washington Recovery Unit have been addressed.** The barriers that are identified as primary impediments to recovery and which must be addressed are Albeni Falls, Box Canyon, and Boundary Dams.

The Northeast Washington Recovery Unit team expects that the recovery process will be dynamic and will be refined as more information becomes available. Future adaptive management will play a major role in recovery implementation and refinement of recovery criteria. While removal of bull trout as a species under the Act (*i.e.*, delisting) can only occur for the entity that was listed (Columbia River Distinct Population Segment), the recovery unit criteria listed above will be used to determine when the Northeast Washington Recovery Unit is fully contributing to recovery of the population segment.

ACTIONS NEEDED

Recovery for bull trout will entail reducing threats to the long-term persistence of populations and their habitats, ensuring the security of multiple interacting groups of bull trout, and providing habitat conditions and access to them that allow for the expression of various life-history forms. Specific tasks

falling within seven categories will be necessary to initiate recovery. The seven categories of actions needed are discussed in Chapter 1; tasks specific to this recovery unit are provided in this chapter.

ESTIMATED COST OF RECOVERY

Total estimated cost of bull trout recovery in the Northeast Washington Recovery Unit for the Pend Oreille Core Area is $29.735 million. This estimate does not include areas outside the Pend Oreille Core Area which are considered a research need nor are do these costs include estimates for tasks that are normal agency responsibilities under existing authorities. In addition, this estimate does not include costs associated with capital improvements associated with recommended fish passage construction at Albeni Falls, Box Canyon, and Boundary Dams. Estimates for construction cost for passage at these facilities are an outcome of recommended actions. Successful recovery of bull trout in the Pend Oreille Core Area is contingent on removing barriers, improving habitat conditions, and removal of non-native species within the Pend Oreille River in Washington. Most importantly, reestablishing the historic connection with Lake Pend Oreille is viewed as essential. Total cost includes estimates of expenditures by local, Tribal, State, and Federal governments and by private business and individuals. These costs are attributed to bull trout conservation, but other aquatic species will also benefit.

ESTIMATED DATE OF RECOVERY

Recovery units are the basis on which bull trout recovery will be gauged. Expected times necessary to achieve recovery will vary among recovery units due to differences in bull trout status, factors affecting bull trout, implementation and effectiveness of recovery tasks, and responses to recovery tasks. A tremendous amount of work will be required to restore impaired habitat, reconnect habitat, and eliminate threats from nonnative species. Three to five bull trout generations (15 to 25 years), or possibly longer, may be necessary before identified threats to the species can be significantly reduced and bull trout can be considered eligible for delisting. In the Northeast Washington Recovery Unit (Pend Oreille Core Area) bull trout currently exist in very low numbers. Degradation and fragmentation of bull trout habitat have resulted populations that are at high risk. These threats must be addressed in the near future if recovery will be achieved.